

AMENDMENTS TO THE CLAIMS

JAN 31 2007

1. (Currently amended) A method comprising:

calculating a number of class-type checks at a site in a method that minimizes a cost of inlining;

generating inline code for the number of the class-type checks for the site in the method;

sorting the inline code based on a frequency of the class types; and

generating an out-of-line function call for any remaining class-type checks at the site that exceed the number and that are not handled by the inline code
~~generating a number of inline class type checks for a site, wherein the number is selected to minimize a cost of the class type checks at runtime.~~

2. (Canceled)

3. (Currently amended) The method of claim 1, further comprising:

calculating the number based on a cost of the inline ~~code~~class-type check.

4. (Currently amended) The method of claim 1~~claim 2~~, further comprising:

calculating the number based on a cost of the out-of-line function.

5. (Original) The method of claim 1, further comprising:

generating a branch hint for a processor if only one class type is encountered at the site.

6. (Currently amended) An apparatus comprising:

means for calculating a number of class-type checks at a site in a method that minimizes a cost of inlining;

means for generating inline code for the number of the class-type checks for the site in the method;

means for sorting the inline code based on a frequency of the class types; and

means for generating an out-of-line function call for any remaining class-type checks at the site that exceed the number and that are not handled by the inline code;
~~means for calculating a number of inline class-type checks to minimize a cost of the class-type checks at runtime; and~~
~~means for generating inline code for the number of class-type checks for a site in a method.~~

7. (Canceled)

8. (Original) The apparatus of claim 6, wherein the means for calculating the number further comprises:

means for calculating the number based on a cost of the inline code, a cost of an out-of-line class-type check, and a number of times the inline code fails.

9. (Currently amended) The apparatus of ~~claim 6~~claim 7, further comprising:

means for dynamically recompiling the method if a number of the out-of-line function calls exceeds a threshold.

10. (Canceled)

11. (Currently amended) A ~~storage~~signal-bearing medium encoded with instructions, wherein the instructions when executed comprise:

calculating a number of class-type checks at a site in a method that minimizes a cost of inlining;

generating inline code for the number of class-type checks for the site in the method;
~~a site in a method;~~

sorting the inline code based on a frequency of the class types; and

generating an out-of-line function call for any remaining class-type checks at the site that exceed the number and that are not handled by the inline code.

12. (Currently amended) The ~~storage~~~~signal-bearing~~ medium of claim 11, further comprising:

dynamically recompiling the method if a number of the out-of-line function calls exceeds a threshold.

13. (Currently amended) The ~~storage~~~~signal-bearing~~ medium of claim 11, wherein the calculating further comprises:

calculating the number based on a cost of the inline code, a cost of the out-of-line function call, and a number of times the inline code fails.

14. (Currently amended) The ~~storage~~~~signal-bearing~~ medium of claim 11, wherein the calculating further comprises:

calculating the number of class-type checks based on a count of ~~the object~~ object types encountered at the site at runtime.

15. (Currently amended) The ~~storage~~~~signal-bearing~~ medium of claim 11, further comprising:

sorting the inline code based on a frequency of the class types, wherein the sorting further sorts the inline code to check a most frequently occurring class type first.

16. (Currently amended) An electronic device comprising:

a processor; and

a storage device encoded with instructions, wherein the instructions when executed on the processor comprise:

calculating a number of class-type checks at a site in a method that minimizes a cost of inlining,

generating inline code for the number of the class-type checks for the site in the method~~a site in a method~~,

sorting the inline code based on a frequency of the class types, and

generating an out-of-line function call for any remaining class-type checks
at the site that exceed the number and that are not handled by the inline code.

17. (Original) The electronic device of claim 16, wherein the calculating further
comprises:

calculating the number based on a cost of the inline code.

18. (Currently amended) The electronic device of claim 16, wherein the instructions
further ~~comprise~~ comprise:

dynamically recompiling the method if a number of the out-of-line function calls
exceeds a threshold.

19. (Currently amended) The electronic device of claim 16, wherein the calculating
further ~~comprises~~ comprises:

calculating the number based on a cost of the out-of-line function call, and a
number of times the inline code fails.

20. (Currently amended) The electronic device of claim 16, wherein the calculating
further ~~comprises~~ comprises:

calculating the number based on a count of ~~the object~~ object types encountered at
the site at runtime.

21. (Original) The electronic device of claim 20, further comprising:

incrementing the count at runtime.